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ABSTRACT

The Extension Committee on Organization and Policy's National Task Force on Cooperative Extension Inservice Training (1959) identified nine major areas of compentency considered important for all extension workers. It concluded that after the induction period, training for experienced workers should enlist the abilities of the participants themselves to a greater degree in a problem-solving approach. An examination of programs has indicated, however, that much of the inservice training for experienced workers calls for mere absorption of information presented in talks or lectures. The available, though limited, research and material on extension inservice training seems to show that inservice training programs are primarily meeting the technical subject matter needs of agents but are not adequately addressing other identified competency needs. Studies that have assessed the perceived needs of extension agents and focused on the identified nine major areas of training have revealed that technical knowledge has consistently been ranked high. Agents' felt needs for training have also tended to relate strongly to the competency area of communication. The literature seems to indicate that quality inservice training programs in other competency areas beside technical subject matter competencies must be developed and offered to extension staff. (YLB)

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A Paper By

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Staff Development in the Cooperative Extension Service

Identification Of Skills Needed By Extension Agents

The Cooperative Extension Service offers a balanced educational outreach program that serves a great variety of complex needs. The county agent is the professional charged with the responsibility of carrying out these programs through the guidance of county program development committees and with expert assistance from Extension subject matter specialists at the university or area Extension office.

In discussing the qualities needed by an Extension professional, Strother (1977) stated the professional will be measured on those qualities by the "changes in the behavior of people and their environments" (p. 10). The development of the concept of the "change agent" for Cooperative Extension Service agents was advanced by Everett Rogers (1962) in his "The Diffusion Of Innovations". His change agent concept had the county agent not only as a counselor and diagnostician to individual farmers with individual needs but also a conveyor of new facts and practices based on the agricultural research and experimentation of the Land Grant universities.

By the late 1960's, Havelock, et al.(1973) combined Rogers concept with an earlier conception of the social change agent as a person who had the skills necessary to help a client work out problems in an integrated step-by-step sequence. This new concept saw the change agent as process helper and knowledge linker. They defined the sets of skills needed by the change agent as:

interpersonal and inter-group relating, consultation, need definition, diagnosis, problem-solving, resource acquisition, dissemination, and utilization. (p. 3)

During the 1940s and 50s, Extension agents followed the specialization trend common to the agricultural development of that period. By 1983, there was one Extension specialist for every three county staff. Not only had the number of state and area specialists increased, but county Extension faculty had been encouraged to obtain advanced degrees in techincal areas of agriculture and home economics. However, according to Warner and Christenson (1984), the trend toward increased specialization may be reversing. They point out that while subject matter competency is still important, increasingly there is the realization that county faculty must have a broad background and an ability to seek out solutions to a wide array of technical problems. This indicates a need to emphasize the change skills defined by Havelock, et al. in any in-service training program for Extension agents.

Conter et al. (1983) reported three implications of the adult learner characteristics for faculty development with the first being the need to reorient faculty from a subject matter or discipline-centered approach to instruction to a student-centered one. Instructional ends and the means to them cannot be tailored to the subject matter only. A second implication of the characteristics of the adult learner is the need for faculty to define their role as a facilitator of learning rather than dispensor of knowledge. The final implication is the realization that faculty are adult learners themselves and consequently, designers of in-service education programs must be aware of this when developing training programs. While Conter et al. were reporting on faculty development as it relates specifically to continuing education faculty, the same can probably be said for Extension faculty.

Jung (1967) emphasized the importance of training educators to analyze work-related problems, gather data and information bearing on

problems, derive implications and action alternatives, and choose a course of action. The two major assumptions of this approach are: (a) process skills are a key to change, and (b) such skills are amenable to inservice training.

A national task force on in-service training was appointed in the late 1950's by the chairman of the subcommittee on training of the Extension Committee on Organization and Policy (ECOP) (1959) of the Land-Grant Colleges. In a survey of the states to determine their current status of in-service training programs, none of the sample materials sent in by States met in full the definition of an in-service training program as defined by the task force. As stated in the report:

For the most part, State training programs consist of a list of topics to be covered at subject matter specialists' meetings. In-service training in these States apparently is equated with training in technical agriculture and home economics. Occasionally, a cultural topic is included, such as "Growing Up With Music." Or human relations or an educational method subject may be covered, such as "Club Agent Techniques," and "Understanding Youth." These are rare. Though large majorities of agents in States making surveys of training needs indicated much need for training in program development, methods of teaching, leadership development, and evaluation, few States reported training in these areas during 1959. (p. 50)

The task force identified nine major areas of competency generally considered important for all extension workers. The areas are classified as follows:

1. The Cooperative Extension Service
2. Human Development
3. Program Development

4. Educational Process

5. Social Systems

6. Communication

7. Philosophy

8. Technology

9. Research and Evaluation

While technology is only one of nine competency areas, much in-service training is currently conducted exclusively to meet that specific competency need. The other competency areas are not totally ignored, but do not receive the attention their relative importance to the overall quality of the Cooperative Extension Service warrants. Taken one step further, a case can perhaps be made that Extension agents recognize the importance of the nine competency areas and see the need for in-service training programs in the different areas. However, even when such training is offered, agents may tend to participate in in-service training in technical subject matter areas instead. They may even tend to participate in those technical training sessions where they are already most competent and comfortable with the subject matter.

Developing An Effective In-service Training Program

The ECOP (1959) task force defined Extension in-service training as follows:

In-service training is that phase of organized learning experience which is provided employees by the agency throughout the employment period. It is training directed towards developing understanding of job operations and standards, agency philosophy, policies and procedures, as well as current technical research findings. It includes induction training for new workers and on-the-job training in both subject matter

and in educational methods for experienced personnel at all levels of the organization. (p. 1)

The general goal of in-service training reported by the task force, is to (1) fill in gaps in the previous preparation; (2) develop ability to carry out the Extension program; and (3) stimulate continued growth of Extension personnel. Training is done to the end that Extension workers:

1. Are basically grounded in the physical and social sciences of significance to life in America.
2. Are familiar with reliable sources of important information.
3. Understand the background, philosophy, objectives, policies, and organization of the Extension system.
4. Are skillful in applying principles of psychology and education to Extension teaching, supervision, and administration.
5. Can organize people and stimulate leadership among them.
6. Understand the processes by which lay people and Extension workers cooperating can analyze local problems, arrive at potentially sound solutions, and develop a county extension program.
7. Know the problems and procedures of adult and out-of-school education.
8. Are skillful in organizing, interpreting, and presenting basic economic, social, technical and scientific data, and their implications in life.
9. Understand the techniques and processes of evaluating the effectiveness of Extension programs. (p. 7)

Mosher (1978), presents five propositions that are important as arguments for in-service training:

1. In Extension teaching, the unit of instruction is the "changed practice"; everything the Extension worker knows relevant to each

specific changed practice needs to be organized around it.

2. In Extension teaching, information and training in skills must be transmitted through specific teaching methods.

3. Learning is most effective when it occurs just before it can be used.

4. The foregoing three propositions argue for a pattern of in-service training involving brief and frequent periods of training in which technical knowledge and teaching methods related to specific changed practices are considered together.

5. In-service training can be made much more effective by the use of well-designed teaching aids. (p. 100)

Smith and Woeste (1983) contend too little time is usually spent on evaluation of in-service educational programs before their implementation. If the in-service training program isn't on target to solve the training needs of the extension faculty, even though the training program may have perfectly valid content, it may have no positive impact. Correctly targeted but poorly designed training programs may also have no impact because faculty may develop negative attitudes about in-service programs and future training opportunities are thus negatively impacted. Relevant criteria to be examined at the pre-implementation stage of in-service programs are:

1. Worthiness of the objectives: Do objectives support Extension mandates and goals?

2. Appropriateness of program to situation: Is the performance problem addressed one that's best solved by an educational program?

3. Appropriateness of course content/activities to objectives: Are experiences
appropriate for the expected later behavior of participants?

4. Appropriateness of preprogram publicity: Does the title clearly

identify the content? Is there a clear statement of the objectives and the depth and breadth of content to be covered?

5. Qualifications of staff: Do staff credentials provide evidence of competency in the content area of the in-service program and/or in the process of teaching?

6. Efficiency of resources planned: Are resources available to cover costs of the program?

7. Comprehensiveness of evaluation plans: Are objectives written in measurable terms? (p. 23)

Smith and Woeste suggest that further information gathering during the in-service program is necessary to properly evaluate causes for the success or lack of success of the program. Such criteria as appropriateness of the participants, the fit of actual and planned activities, the appropriateness of the facilities and the effectiveness of the instructors, are important considerations. Finally, gathering information about the in-service program after it has been completed (the most often used approach in evaluation) is necessary to judge the ultimate value or results of the program. Some of the criteria Smith and Woeste have suggested for this stage are the level of participant enjoyment, the increase in learning, behavioral changes that may have occurred and benefits to the organization. Consideration of the information necessary for evaluation of the in-service training program, if gathered pre-implementation, during implementation and post-implementation, will allow for more effective in-service experiences for Extension faculty.

Just what is important to be included in an in-service training program for Extension faculty. As previously reported, technical

knowledge is important and as changes occur in technology and new information becomes available on a given technical subject, in-service programs must be developed to meet this need. At the same time, it has been suggested that there is less need for specialization and more emphasis should be place on process and the development of facilitation, counseling and human resource skills.

Jenkins (1975) in his orientation guide for new Cooperative Extension faculty lists 13 areas of orientation:
Understanding the position and the job responsibilities; Understanding the process in planning Extension programs; Understanding the involvement of people in Extension program development; Understanding office operations; Planning and effecting educational change with clientele groups; Understanding the items and steps related to processing appointments; Get acquainted with people involved in Extension; Understanding the Extension organization at the county, area, and state levels; Know the county where the agents are going to work; Understand and know how to use Extension methodology in communication; Understand Extension professionalism and professional development opportunities; Experience the first day on the job; Satisfying personal and family needs prior to the starting date of employment.

Studies Relating To Extension In-service Training Needs And Programs

Orientation is a specialized kind of in-service training that lasts typically through the first year of employment. It's designed to provide a transitional period for newly hired Extension faculty to help them adjust to the working and living conditions in their new job. Jahi and Newcomb (1981) asked the question, "Does orientation training need to be adjusted to the indivual's background and characteristics?" Their

research resulted in an answer of "no". In measuring people with dissimilar backgrounds or characteristics against Jenkin's 13 areas of orientation, one group rated the amount of training they felt they needed and a second group rated the importance of these areas of orientation training. They found no significant differences among people with dissimilar backgrounds or characteristics and concluded that agents' orientation training programs do not need to be modified on the basis of any of the characteristics examined in the study.

A study to determine the relationship between the educational orientation toward teaching adults and job performance was conducted using rural New England Extension agents as subjects (Patterson 1984). Educational orientation was measured by the Educational Orientation Questionnaire(EOQ), a 60 item instrument which provided a score on an andragogical-pedagogical continuum. Job performance was measured by the Extension Agent Behaviors and Results Anchored Rating System(EABRARS), a performance appraisal instrument developed for the study, which utilized a behaviorally-anchored rating scale format. It was concluded that no significant relationship exists between the educational orientation of rural New England Extension agents as measured by the EOQ, and a rating of their job performance, as measured by EABRARS.

A study was made to determine (1) trainee and trainer agents' assignment of the importance of selected learning experiences for newly employed Extension agents to engage in during induction training; (2) trainee and trainer agents' assessment of timing of selected learning experiences for newly employed Extension agents to engage in during induction training; and (3) differences between responses of the two groups of agents concerning importance and timing of the selected learning experiences (Reynolds 1970). 66 learning experiences were

delineated from a listing in the 1968 North Carolina Induction Training Guide For New County Extension Agents. Trainees assigned 35 of the experiences to the first six-month period and 31 to the second six-month period. Trainers indicated the first six-month period was appropriate for 33 experiences and the second for 32. A large majority assigned experiences in the areas of "philosophy and objectives" and "office and time management" to the first six months. Responses were more dispersed in the other areas.

The perceptions of Oklahoma county Extension agricultural agents concerning their levels of competence and educational needs in selected technical agricultural topics, and the implications of these perceptions for future in-service training programs, were analyzed (Lessly 1981). In general, respondents indicated their overall level of competence, frequency of use, and priority for additional training to be highest for the general areas of Horticulture, Entomology, Animal Science, and Agronomy. Younger, less experienced agents did perceive their levels of competence slightly less, but their needs for training slightly greater than did the more experienced agents. Specific subject matter topics used most frequently were those for which agents perceived the most need for additional training.

A study was conducted to determine if differences exist in the training needs, audiences served, and teaching methods used for reaching cooperative extension clientele by agricultural agents in relationship to county population (Hartley 1977). The following definition was used to separate the counties into four population groups: Metropolitan, 200,000 and higher; Urban, 100,000 to 200,000; Sub-rural, 50,000 to 100,000; and Rural, less than 50,000. The metropolitan agents required more training in floriculture, house plants, landscaping, food processing, use of

teaching aids, leadership development, influence of sub-culture groups, and urbanization and urban culture than at least one of the less populated groups. The urban agents required more training in farm credit, business management, and dairy science than did the metropolitan agents. They required more training in urbanization and urban culture than did the two less populated groups. The urban agents taught more by radio than did the other three groups. The sub-rural agents required more training in floriculture than did the rural agents and more training in dairy science than did the metropolitan agents. The rural agents required less training in vegetable growing, lawn care, and fruit growing than did the three more populated groups.

The perceived training needs of urban Cooperative Extension agents working with disadvantaged audiences and the perceived importance of those needs was the subject of a study conducted in the 12 northeastern states (Soobitsky 1971). To determine these needs, the relationships between agents' previous professional preparation, tenure in the Extension Service, divisional responsibilities, experience with disadvantaged audiences, and perceived educational role and the training needs of professionals were determined. Among the conclusions drawn from the study: (1) Collectively the agents perceived the competency areas of communications and social systems as the most important for job effectiveness. (2) Collectively they selected communications as the competency area in which most additional training is needed.

Four studies dating from 1971 were located which assessed the perceived needs of Extension agents. All four studies focused on the nine major areas of training identified by A National Task Force On In-service Training appointed by the Chairman of the Subcommittee on Training of the Extension Committee on Organization and Policy (ECOP) of

the Land-Grant Colleges.

Brooks (1982) study assessed Florida's county Extension agents perceptions of in-service training needs with a moderate relationship between Florida's county and state Extension staff perception of degree of importance for the nine major areas of training. Among the nine major areas of training, technical knowledge in program areas was statistically significant with statistical areas of employment, academic level, academic major (highest degree earned) and rank.

Georgia agents' (Williams 1984) perceptions of training needs were analyzed from three perspectives: (1) present competency level, (2) interest in competency area, and (3) importance of competency area to job. The findings revealed an extemely narrow range of mean score values across all test groups. However, much greater diversity was noted as to rank priority assigned to the competency areas by test groups. Relatively high correlations were observed between interest and importance. A fairly low level of correlations was noted between competency/interest and competency/importance. Technical knowledge and communication were constantly ranked highest among all test groups.

The main purpose of this study (Hubbard 1971) was to examine the relationships between South Carolina agents' and administrators' concepts of those items in certain competency areas considered very important for the agents' effectiveness as a county worker and the agents' need for training in these areas. Agents and administrators tended to place more emphasis on the following competency areas, listed in rank order: communication, program planning and development, and human development. The findings of the study indicated that agents' felt needs for training tended to relate strongly to the competency areas identified as very important for effectiveness, although there was some variation regarding

the felt needs for training in specific items.

In a study to determine the professional competencies needed by Extensions agents of the Pennsylvania Cooperative Extension Service (Gonzalez 1982), a subsidiary purpose was to identify when the competencies should be learned by the Extension agent. The findings indicated there were no significant differences in the perceptions of Extension agents and state staff members regarding the importance of the nine competency categories developed by ECOP. In identifying when various competencies should be learned, the combined responses for extension agents and state staff members on 144 identified competencies, indicated that 26 competencies should be included in a graduate program and the remaining 113 can be learned on the job or through in-service training. Competencies included in the teaching, communication, and understanding human behavior categories should form a key component of any undergraduate program developed for preparing extension agents.

Self-perceived in-service training needs of Florida Cooperative Extension agents before and after considering predicted changes in the state, was the subject of a study by Cole (1979). In order to achieve the purpose of the study, the following questions were addressed: (1) What are the current self-perceived in-service training needs of Florida Cooperative Extension agents? (2) What are the projected self-perceived in-service training needs, based on changes predicted in the state by leading futurists? (3) How do the current needs compare to the projected needs? (4) How do these self-perceived needs relate to: (A) Specialized area of work; (B) Tenure in Extension; (C) Job perception. Some of the conclusions of the study were:
(1) The planning and implementation of in-service training programs for the Florida Cooperative Extension agents did not appear to be satisfying

the full range of self-perceived needs of the agents. (2) The Florida Cooperative Extension Service did not appear to have a clear-cut understanding of what either its current or future goals were, and this apparent lack of definitiveness about direction may have been a factor in the agents' felt needs for in-service training. (3) In establishing priorities for in-service training for agents, consideration should be given to both current and future directions in the Florida Extension Service. (4) Based upon the self-perceived needs of the agents, the in-service training programs for Florida Cooperative Extension agents should address basic competency skills in areas other than just Extension program subject matter.

Summary and Conclusions

The ECOP National Task Force On Cooperative Extension Inservice Training (1959) in reporting on the appropriateness for objectives for training activities, concluded:

After the induction period, training for experienced workers should enlist the abilities of the participant himself to a greater degree in a problem solving approach. An examination of programs indicates, however, that much of the in-service training for experienced workers calls for mere absorption of information presented in talks or lectures. It fails to capitalize on the increased competency gained through experience with real life situations. Too much emphasis is put on philosophy and too little on techniques; too much learning is treated superficially. Too much attention in training is given to quantity and too little to qualtiy. (p. 53)

There is a limited amount of recent research and limited published material relating to recent studies of Extension in-service training.

However, the available material seems to indicate in-service training programs are primarily meeting the technical subject matter needs of agents but are not adequately addressing other identified competency needs. Part of this is undoubtably because agents see a high need for technical training and willingly participate in it. They also see a high need for communications training but questions are raised about its availability and/or quality of presentation. While most agents generally identify and agree with the nine competencies identified by the ECOP task force, they identify technical competencies as the area of greatest training need. Is it really because of subject matter being the greatest training need or is it because agents prefer to participate in training where they already possess a high degree of competence and have a high interest?

Warner and Christenson (1984) in discussing policy issues facing Extension, ask the question, "Should Extension's staffing arrangements stress greater specialization or should more emphasis be placed on the generalist role?" The same question can be altered to address in-service training and be a valid question. They postulate "the specialist versus generalist debate is no longer the relevant issue. In today's information-based society, Extension agents will need new skills that don't necessarily fit the stereotypic roles associated with generalists and specialists. And the availability of new technologies and information systems may lead to entirely new schemes of staffing arrangements and communication methods." They argue that "Extension's most constructive response would be to bury the generalist-specialist debate and get on with identifying the needs of these new job roles, training staff in appropriate skills, and reorganizing its delivery system to fit a new age" (p. 130). Is the process helper-knowledge

linker change agent of Havelock et al. (1973) more appropriate now than ever in defining a set of skills and a need for in-service training for Extension agents?

If indeed there are other competency areas beside technical subject matter competencies that are important to an Extension agent being a successful educator, then quality in-service training programs must be developed and offered to the Extension staff. They must be of sufficient qaulity to attract agents to enroll in them and provide valuable information so as to sustain interest for future in-service opportunities.

New studies are needed to not only define the skills needed by information-age Extension agents, but to verify current perceptions of Extension agents in selecting in-service training opportunities and their reasons for that selection. In addition, further work is needed to develop meaningful, successful and properly evaluated in-service training that will meet the emerging needs of Extension agents.

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